

# IPL's 2007 Summer Capacity

## Presentation to IURC

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 **THE POWER BEHIND INDIANAPOLIS** 

**IPL**  
  
An AES Company

# Presentation Overview

- Customer demand assessment
- Supply resources
- Reserve margins
- Customer Demand Response options
- Residential energy efficiency programs
- IPL generation
- Power Purchases
- MISO Market



# IPL Historical Summer Peaks

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
MW	2,892	2,915	3,118	3,116
Date	Aug 26	July 22	July 25	July 31
Hour	5:00 PM	4:00 PM	4:00 PM	4:00 PM
Temp.	89°F	88°F	95°F	93°F



# IPL 2007 Summer Projected Peaks (MW)

	<u>June</u>	<u>July</u>	<u>August</u>
Total Demand	3,063	3,195	3,154
Demand Response	89	89	89
Net Demand	2,974	3,106	3,065

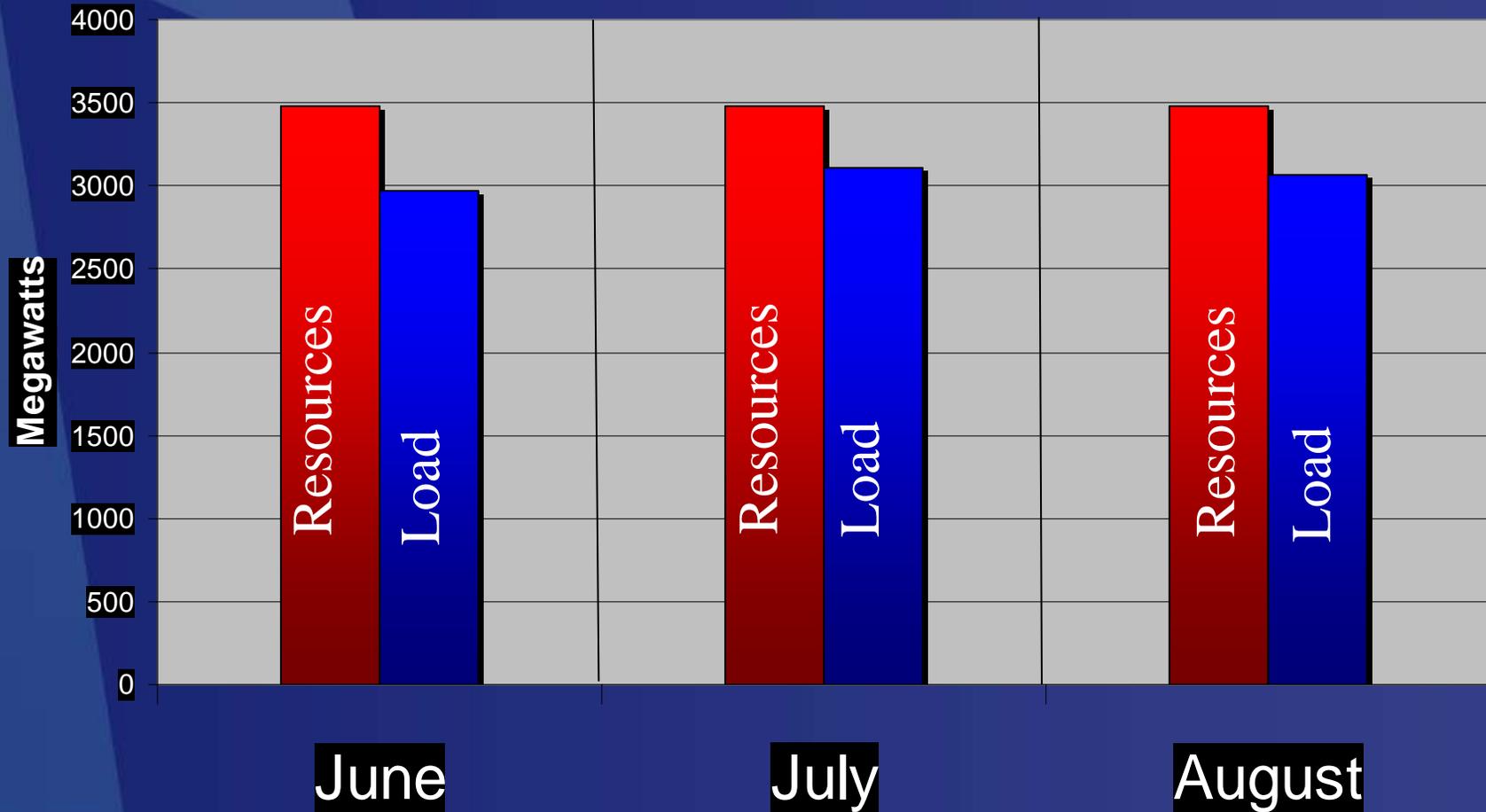


## Supply Resources 2007 (MW)

IPL Owned Generation	3,282
Perry K (CTE)	5
Power Purchases	173
Scrubber Option	<u>19</u>
<b>Total Supply Resources</b>	<b>3,479</b>



# Supply Resources vs. Projected Peak Load



Reserve Margin (MW) 505

373

414

Reserve Margin (%) 17.0%

12.0%

13.5%

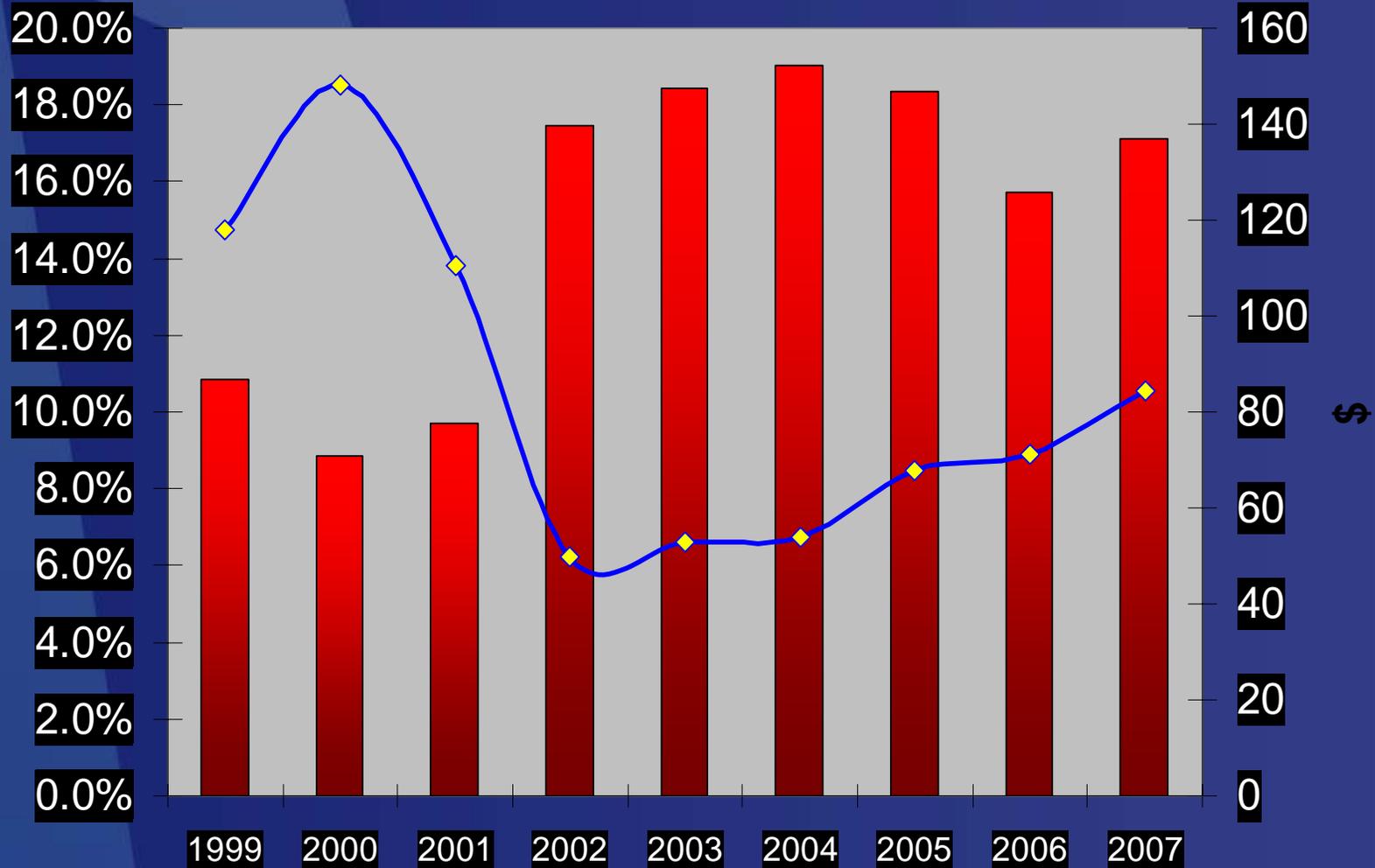


# IPL & RFC/MISO *Reserve Margins* Summer 2007

	<u>June</u>	<u>July</u>	<u>August</u>
IPL Reserve Margin %	17.0%	12.0%	13.5%
Reliability First %	29.0%	20.7%	24.7%
MISO %		23.2%	



# Capacity Margin vs. Forward Market Prices ECAR/RFC(2007)



■ ECAR/RFC % Capacity Margin ◆ July/Aug 5X16 Forward Market Prices (\$)



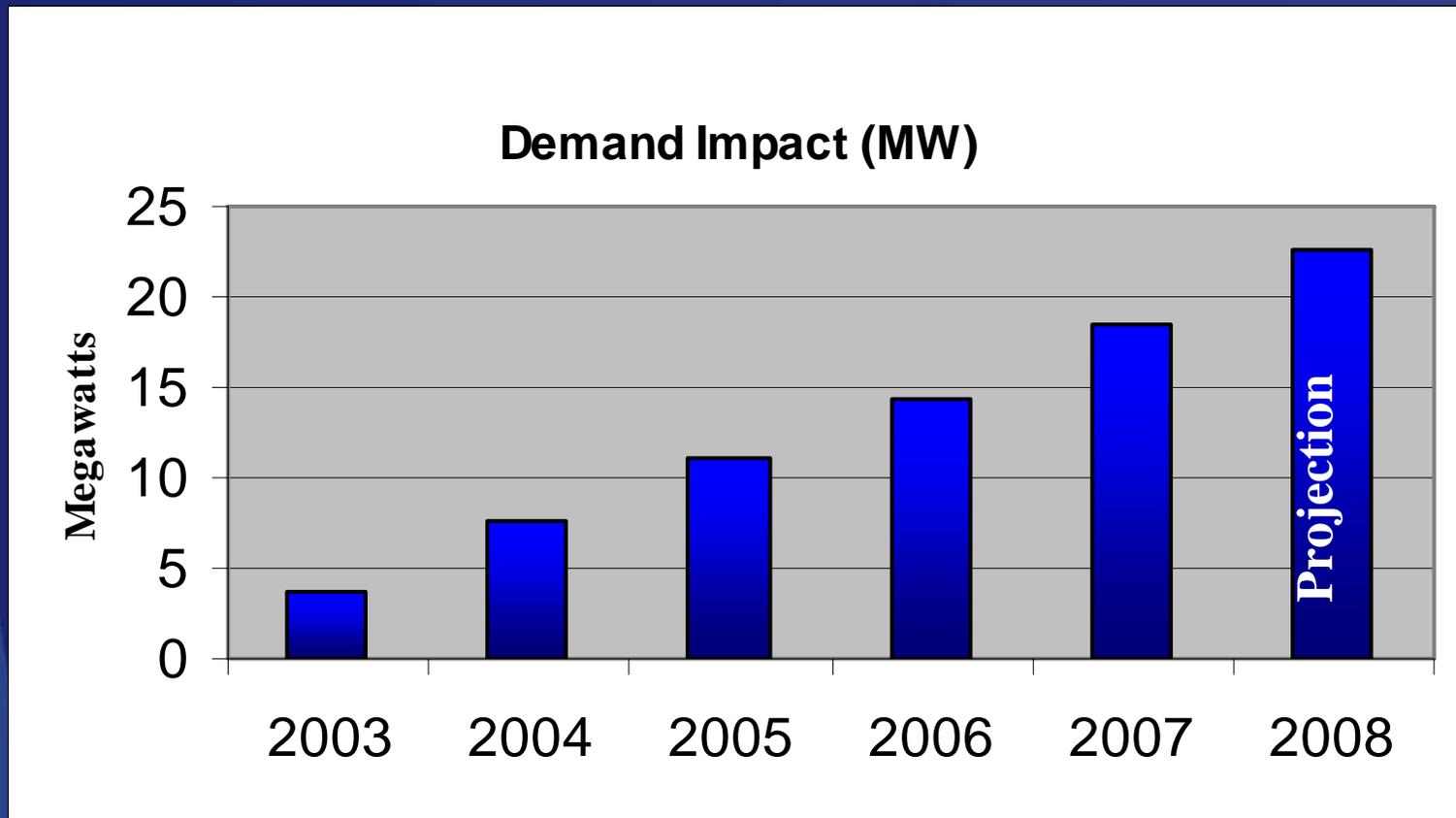
# Customer Demand Response Options

## Summer Demand Impacts (MW)

	PROJECTED		
	<u>2005</u>	<u>2006</u>	<u>2007</u>
<b>Real-time interruptible</b>	12	12	12
<b>Customer-owned generation</b>	34	42	42
<b>Interruptible with notice</b>	15	7	7
<b>Low load factor interruptible</b>	9	10	10
<b>Air Conditioning Load Mgmt</b>	11	14	18
<b>Total</b>	<b>81</b>	<b>85</b>	<b>89</b>



# Demand Response-ACLM “CoolCents”



# Residential Energy Efficiency Programs

- Income qualified weatherization
- High efficiency heat pump and air conditioner incentives
- Energy efficiency education
- Renewable energy education



# Schmidt & Associates PV system



Third Sun Solar & Wind



## Schmidt Associates — Indianapolis, IN

VIEW **Simple** Detail

Right Now 12:30 PM May 24, 2007

System Size: 3 kW DC

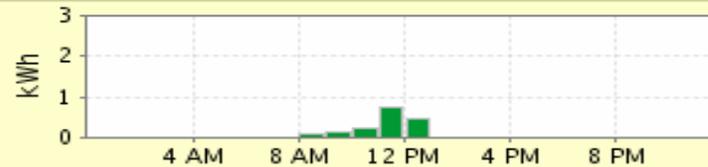
Generating 1,115.0 W



Historical ⓘ

Today Week Month Year Lifetime

Generated 1.7 kWh



Greenhouse Gases Avoided Since Installation Jul 25, 2006 ⓘ

CO<sub>2</sub> 4,046 lbs.

Average household CO<sub>2</sub> output is 22,750 lbs./yr.

Equivalent to:



The energy to power 65 homes for one day.



The energy to make 74,297 cups of coffee.



# IPL Generation

## Petersburg – 1,760 MW

<b>Unit</b>	<b>Fuel</b>	<b>Output (MW)</b>	<b>Environmental Controls</b>
<b>Unit 1</b>	<b>Coal</b>	<b>232</b>	<b>FGD, NN</b>
<b>Unit 2</b>	<b>Coal</b>	<b>435</b>	<b>FGD, SCR</b>
<b>Unit 3</b>	<b>Coal</b>	<b>540</b>	<b>FGD, SCR</b>
<b>Unit 4</b>	<b>Coal</b>	<b>545</b>	<b>FGD, LNB</b>
<b>DG</b>	<b>Diesel</b>	<b>8</b>	



# IPL Generation

## Harding Street – 1,102 MW

<b>Unit</b>	<b>Fuel</b>	<b>Output (MW)</b>	<b>Environmental Controls</b>
<b>Units 3 &amp; 4</b>	<b>Oil</b>	<b>70</b>	
<b>Unit 5</b>	<b>Coal</b>	<b>106</b>	<b>SNCR, NN</b>
<b>Unit 6</b>	<b>Coal</b>	<b>106</b>	<b>SNCR, NN</b>
<b>Unit 7</b>	<b>Coal</b>	<b>435</b>	<b>SCR (FGD)</b>
<b>CTs 1-3</b>	<b>Oil</b>	<b>60</b>	
<b>CT 4</b>	<b>Oil/Gas</b>	<b>82</b>	
<b>CT 5</b>	<b>Oil/Gas</b>	<b>82</b>	
<b>CT 6</b>	<b>Gas</b>	<b>158</b>	
<b>DG</b>	<b>Diesel</b>	<b>3</b>	



# IPL Generation

## Eagle Valley – 341 MW

<b>Unit</b>	<b>Fuel</b>	<b>Output (MW)</b>	<b>Environmental Controls</b>
<b>Units 1 &amp; 2</b>	<b>Oil</b>	<b>78</b>	
<b>Unit 3</b>	<b>Coal</b>	<b>43</b>	
<b>Unit 4</b>	<b>Coal</b>	<b>56</b>	<b>LNB</b>
<b>Unit 5</b>	<b>Coal</b>	<b>62</b>	<b>LNB</b>
<b>Unit 6</b>	<b>Coal</b>	<b>99</b>	<b>NN</b>
<b>DG</b>	<b>Diesel</b>	<b>3</b>	



# IPL Generation Georgetown

<b>Unit</b>	<b>Fuel</b>	<b>Output (MW)</b>
<b>GT 1</b>	<b>Gas</b>	<b>79</b>

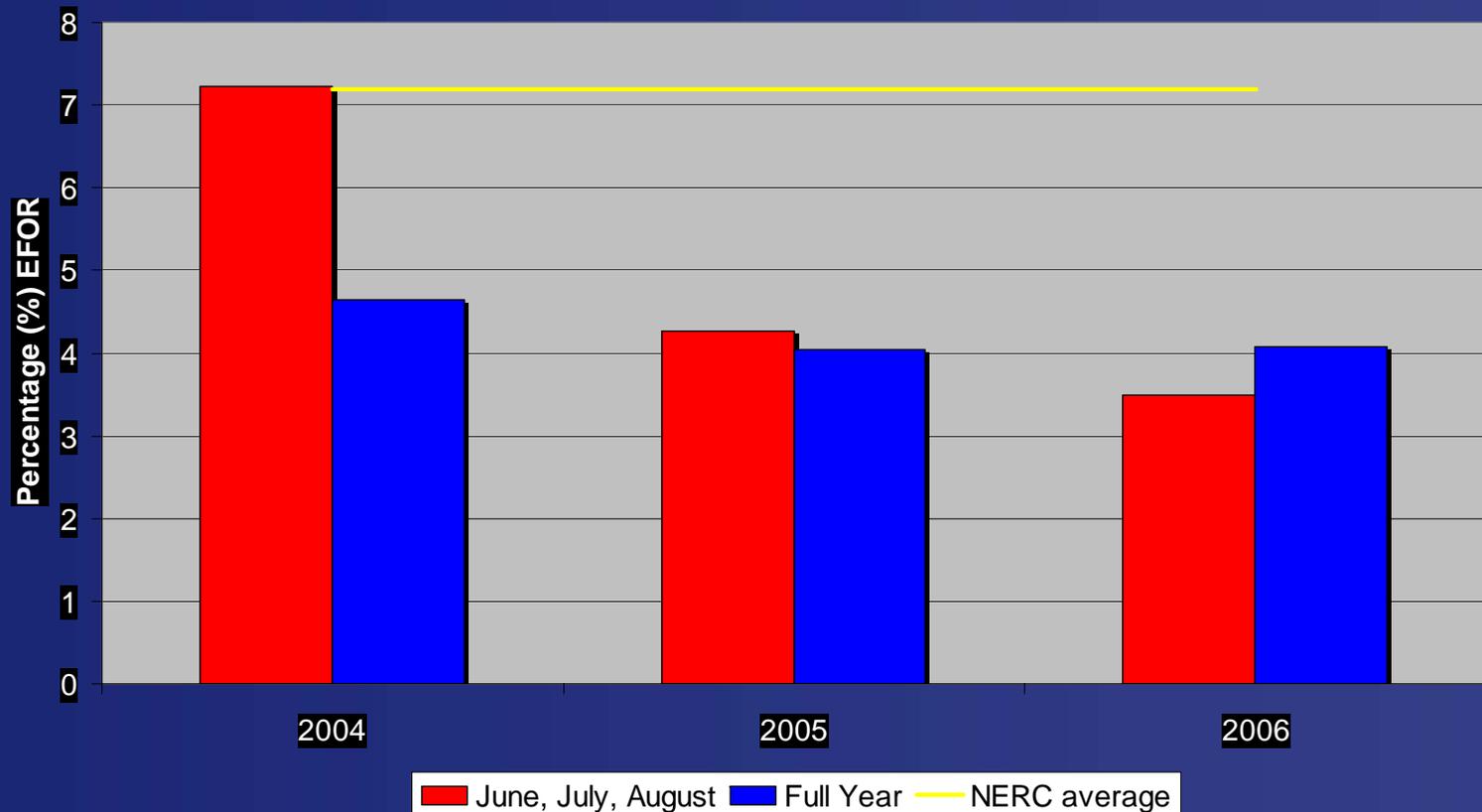
**Georgetown is a 4 unit plant:**

**GT 2 & 3 owned by IMPA**

**GT 4 owned by DTE Energy  
[Purchase by IPL is pending]**



# Equivalent Forced Outage Rate (EFOR)



EFOR is an industry measure that represents the effect on unit reliability due to unit forced outages and/or unplanned derates.



# Power Purchases

- 73 MW Unit Power Purchase
  - May—September 2007
  - With DTE Energy for Georgetown Unit 4
- 100 MW Power Purchase
  - May—September 2007
  - Backed by peaking capacity in MISO



# MISO Market

- Successful transition from prior bi-lateral market despite record setting summer peak demands in 2005
- Provides near real-time economic dispatch of IPL generation with generation supply of entire MISO footprint
- Actively involved at MISO



# MISO Energy Emergency Alert 2

- EEA2 issued: August 1 and 2, 2006
- Requested member companies to make emergency units available
- Public appeal
- IPL responded as requested
  - Actually called on customers to interrupt, curtail, or exercise other forms of DR on 7/31, 8/1, and 8/2
  - IPL experienced no operating difficulties



# Summary

- IPL's Resource Portfolio of Owned Generation, Demand Response Options, and Power Purchases will support projected summer 2007 customer load requirements.

